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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/627,492
Filing Date: July 25, 2003
Appellant(s): SKOW, GREGG E.

Paul Amrozowicz (Reg. No. 45,264)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 29 July 2010 appealing from the Office action mailed 16 November 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1, 6-15, 20-28, 37 and 42-49

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,804,664	HARTMAN ET AL	10-2004
5,710,915	MCELHINEY	1-1998
5,201,046	GOLDBERG ET AL	4-1993
6,134,500	TANG ET AL	10-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 7, 11, 15, 20, 21, 25, 37, 42, 43 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,804,664 to Hartman et al (hereafter Hartman) in view of US Patent No 5,710,915 to McElhiney (hereafter McElhiney).

Referring to claim 1, Hartman discloses a program product, comprising:

a) a database that is compatible with multiple end-user systems, the database comprising:

a data section [content databases], each data table including a plurality of data records that each have one or more features that affect its compatibility with one or more of the end-user systems, each data record including a feature field that contains one or more feature bits representative of each of its features [the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes] (see column 4, lines 35-46; column 6, lines 19-24; and column 7, lines 39-48); and

a structure section, each feature mask table including data a feature mask record for each of the multiple end-user systems that use one or more of the data tables that include the data records having one or more features [user profile includes information about the client devices] (see column 6, lines 25-38 and column 7, lines 16-26), each feature mask record including one or more feature mask values that indicate the data records is the one or more features of a data record are compatible with one or more of the end-user systems [binary attribute matching where user profile database can be matched against content profile database], and thereby indicate whether the data record is compatible with one or more of the end-user systems [holding list is a list of matching records] (see column 8, lines 9-18 and lines 54-61); and

b) at least one physical computer-readable medium having said database stored thereon (see Fig 1).

Hartman fails to explicitly disclose wherein the data section and the structure section each comprise of a plurality of tables. McElhiney discloses the partitioning of a data table into a plurality of tables (see column 7, lines 49-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access.

Referring to claim 6, the combination of Hartman and McElhiney (hereafter Hartman/McElhiney) discloses the program product of Claim 1, wherein the structure section further comprises a system identification table that includes data that uniquely identifies each of the end-user systems [the user profile and the client profile databases are considered to represent the information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 7, Hartman/McElhiney discloses the program product of Claim 6, wherein the system identification table comprises a plurality of system identification records, each system identification record associated with each of the end-user systems [the user profile and the client profile databases are considered to represent the information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 11, Hartman/McElhiney discloses the program product of Claim 1, wherein: each data record includes a plurality of fields in addition to the feature field (see column 7, lines 36-38 and column 4, lines 35-46); and the structure section

further comprises a field definition table that includes at least data representative of each of the data record fields [correlation table 160] (see column 7, lines 39-42).

Referring to claim 15, Hartman discloses a method of generating a database that is compatible with multiple end-user systems, the method comprising the steps of:

generating a data section [content databases] (see Fig 1);

storing a plurality of data records in the data section, each data record including a feature field [record with attributes] (see column 4, lines 35-46);

associating one or more features [attributes] with each data record (see column 4, lines 35-46);

supplying each feature field with one or more feature bits that represent each of the features associated therewith [the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes] (see column 6, lines 19-24 and column 7, lines 39-48); and

generating a structure section that comprises a plurality of feature mask tables, each feature mask table including a feature mask record for each of the end-user systems that use one or more of the data tables that include the data records having one or more features [user profile includes information about client devices] (see column 6, lines 25-38 and column 7, lines 16-26); and

including one or more feature mask values, in each feature mask record, that indicate whether the one or more features of a data record are compatible with one or more of the end-user systems [binary attribute matching where user profile database 140 can be matched against the content profile database], to thereby indicate whether

the data record is compatible with one or more of the end-user systems [holding list is a list of matching records] (see column 8, lines 9-18 and 54-61).

Hartman fails to explicitly disclose dividing the data section into a plurality of data tables that each include a plurality of the data records. McElhiney discloses the partitioning of a data table into a plurality of tables, including the limitation of dividing the data section into a plurality of data tables that each include a plurality of the data records (see column 7, lines 49-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access.

Referring to claim 20, Hartman/McElhiney discloses the method of Claim 15, further comprising: generating a system identification table that includes data that uniquely identifies each of the end-user systems [the user profile and the client profile databases are considered to represent the information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 21, Hartman/McElhiney discloses the method of Claim 20, further comprising: including a plurality of system identification records in the system identification table, each system identification record associated with each of the end-user systems [the user profile and the client profile databases are considered to represent the information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 25, Hartman/McElhiney discloses the method of Claim 15, further comprising: including a plurality of fields in addition to the feature field (see column 7, lines 36-38 and column 4, lines 35-46); and generating a field definition table that includes at least data representative of each of the data record fields [correlation table 160] (see column 7, lines 39-42).

Referring to claim 37, Hartman discloses a computer system, comprising: a processor; memory in operable communication with the processor; and a database stored in the memory (see Fig 1), the database compatible with multiple end-user systems and including:

a data section [content databases], each data table including a plurality of data records that each have one or more features that affect its compatibility with one or more of the end-user systems, each data record including a feature field that contains one or more feature bits representative of each of its features [the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes] (see column 4, lines 35-46; column 6, lines 19-24; and column 7, lines 39-48); and

a structure section, the each feature mask table including a feature mask record for each of the multiple end-user systems that use one or more of the data tables that include the data records having one or more features [user profile includes information about the client devices] (see column 6, lines 25-38 and column 7, lines 16-26), each feature mask record including one or more feature mask values that indicate whether the one or more features of a data record are compatible with one or more of the end-

user systems [binary attribute matching where user profile database can be matched against content profile database], and thereby indicate whether the data record is compatible with one or more of the end-user systems [holding list is a list of matching records] (see column 8, lines 9-18 and lines 54-61).

Hartman fails to explicitly disclose wherein the data section and the structure section each comprise of a plurality of tables. McElhiney discloses the partitioning of a data table into a plurality of tables (see column 7, lines 49-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access.

Referring to claim 42, Hartman/McElhiney discloses the system of Claim 37, wherein the structure section further comprises a system identification table that includes data that uniquely identifies each of the end-user systems [the user profile and the client profile databases are considered to represent the information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 43, Hartman/McElhiney discloses the system of Claim 42, wherein the system identification table comprises a plurality of system identification records, each system identification record associated with each of the end-user systems [the user profile and the client profile databases are considered to represent the

information that uniquely identifies each end-user system] (Hartman: see column 6, lines 25-38 and column 7, lines 16-26).

Referring to claim 47, Hartman/McElhiney discloses the database of Claim 37, wherein: each data record includes a plurality of fields in addition to the feature field (see column 7, lines 36-38 and column 4, lines 35-46); and the structure section further comprises a field definition table that includes at least data representative of each of the data record fields [correlation table 160] (see column 7, lines 39-42).

Claims 8-10, 12-14, 22-24, 26-28 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,804,664 to Hartman et al in view of US Patent No 5,710,915 to McElhiney as applied to claims 1, 11, 15, 26, 37 and 45 above, and further in view of US Patent No 5,201,046 to Goldberg et al (hereafter Goldberg).

Referring to claims 8, 22 and 44, Hartman/McElhiney fails to explicitly disclose the further limitation of the structure section further comprises a table pointer table that includes data that uniquely describes at least each of the data tables. Goldberg discloses a relational database system, including the further limitation of the structure section further comprises a table pointer table that includes data that uniquely describes at least each of the data tables (see column 14, lines 31-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the definition table of Goldberg in order to describe the tables of

Hartman/McElhiney. One would have been motivated to do so since definition table are well-known to one of ordinary skill in the art when dealing with database systems.

Referring to claims 9, 23 and 45, the combination of Hartman/McElhiney and Goldberg (hereafter Hartman/McElhiney/Goldberg) discloses the further limitation of the table pointer table comprises a plurality of table pointer records; and at least one table pointer record is associated with each of the data tables (Goldberg: see column 14, lines 31-54).

Referring to claims 10, 24 and 46, Hartman/McElhiney/Goldberg discloses the program product of Claim 9, wherein each table pointer record includes data representative of at least: a location of the associated data table; a number of the data records in the associated table; and a size of each data record in the associated data table (Goldberg: see column 14, lines 31-54).

Referring to claims 12, 26 and 48, Hartman/McElhiney fails to explicitly disclose the further limitation wherein the structure section further comprises one or more return type tables, each return type table including data representative of a format of each of the data record fields. Goldberg discloses wherein the structure section further comprises one or more return type tables, each return type table including data representative of a format of each of the data record fields [data type] (see column 6, lines 33-41; column 11, lines 37-59; and column 13, lines 51-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the definition table of Goldberg in order to describe the tables of

Hartman/McElhiney. One would have been motivated to do so since definition table are well-known to one of ordinary skill in the art when dealing with database systems.

Referring to claims 13 and 27, Hartman/McElhiney fails to explicitly disclose the further limitation of a header section that includes data representative of indicia that is used to identify the database. Goldberg discloses the further limitation of a header section that includes data representative of indicia that is used to identify the database (see column 6, lines 33-41; column 11, lines 37-59; and column 13, lines 51-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the definition table of Goldberg in order to describe the tables of Hartman/McElhiney. One would have been motivated to do so since definition table are well-known to one of ordinary skill in the art when dealing with database systems.

Referring to claims 14 and 28, Hartman/McElhiney/Goldberg discloses the further limitation wherein the header section further includes data representative of a location of the structure section (Goldberg: see column 6, lines 33-41; column 11, lines 37-59; and column 13, lines 51-62).

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,804,664 to Hartman et al in view of US Patent No 5,710,915 to McElhiney in view of US Patent No 6,134,500 to Tang et al (hereafter Tang).

Referring to claim 49, Hartman discloses a computer system, comprising: a database stored in the memory (see Fig 1), the database compatible with multiple end-user systems and including:

a data section [content databases], each data table including a plurality of data records that each have one or more features that affect its compatibility with one or more of the end-user systems, each data record including a feature field that contains one or more feature bits representative of each of its features [the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes] (see column 4, lines 35-46; column 6, lines 19-24; and column 7, lines 39-48); and

a structure section, each feature mask table including data a feature mask record for each of the multiple end-user systems that use one or more of the data tables that include the data records having one or more features [user profile includes information about the client devices] (see column 6, lines 25-38 and column 7, lines 16-26), each feature mask record including one or more feature mask values that indicate whether a particular one of the data records is the one or more features of a data record are compatible with one or more of the end-user systems [binary attribute matching where user profile database can be matched against content profile database], and thereby indicate whether the data record is compatible with one or more of the end-user systems [holding list is a list of matching records] (see column 8, lines 9-18 and lines 54-61).

Hartman fails to explicitly disclose wherein the data section and the structure section each comprise of a plurality of tables. McElhiney discloses the partitioning of a data table into a plurality of tables (see column 7, lines 49-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access.

Hartman/McElhiney fails to explicitly disclose the further limitation wherein the database is a navigation database for a flight management system that creates an aircraft flight plan. Tang discloses a navigation database for a flight management system that creates an aircraft flight plan (see column 4, lines 33-63 and column 7, lines 14-31).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the navigation database of Tang with the system of Hartman/McElhiney. One would have been motivated to do so since the type of data does not influence the manner in which the system operates.

(10) Response to Argument

This Examiner's Answer will address the Appellant's arguments in the order in which they appear in the appeal brief.

- ***Issue I: Claims 1, 6, 7, 11, 15, 20, 21, 25, 37, 42, 43 and 47 are not patentable under 35 USC 103 over Hartman et al and McElhiney***

  - ***Issue D.1: Hartman et al do disclose the claimed data section.***

Appellant's Argument: As was noted above, the Office action alleges that that the content databases (150, 151,152) of Hartman et al. correspond to the claimed data section. The Office action references col. 4, 11.35-46, col. 6, 11. 19-24, and col. 7, 11.39-48 to support this allegation.

Interestingly, if one reviews the above-noted portions of Hartman et al., it is readily apparent that these portions do not even remotely address the content databases 20 (150, 151, 152). (Appeal Brief: page 15)

Examiner's Response: The examiner respectfully disagrees that the cited portions are not inference to the content databases. First, it is noted that databases 150, 151 and 152 of Hartman are content databases (see column 3, line 55). Furthermore, as seen in columns 7, line 49 – column 8, line 8, "… the database server stores the profiles of the record in the appropriate databases 140-143, 150-152, 170;" "a query is initiated, for example, when the client device 100 requests content …;" and "the query profile may be a copy of or based upon records of the one or more of the

databases 140-143, 150-152, 170." Therefore, the specification as a whole deals with the retrieval of information from the content databases and therefore in essence so do the cited portions.

Appellant's Argument: More significantly, however, according to the independent claims of the instant application: (1) each data table that comprises the data section includes a plurality of data records that each have one or more features that affect its compatibility with one or more of the end-user systems, and (2) each data record includes a feature field that contains one or more feature bits representative of each of its features. Although Hartman et al. discloses looking up fields in the correlation table and retrieving bitmasks for the attributes corresponding to the fields, nowhere does Hartman et al. disclose, in those portions referenced in the final Office action or any other portion, data records having one or more features that affect compatibility with one or more of end-user systems or data records that include a feature field that contains one or more feature bits representative of each of its features.

In the Response to Arguments section of the final Office action, the Examiner attempts to rebut the above argument by alleging that col. 6, 11.25-38 of Hartman et al. discloses that the user profile database stores information regarding users and about client devices, and that that col. 5, 11.3-14 and 25-33 disclose that a binary attribute is compared to the profile. Based on this, the Examiner makes the conclusory statement that because "the profile information can be device information, the records can be filtered based on compatibility." This statement is erroneous, and thus so is the conclusion.

First of all, the allegation that Hartman et al. discloses that the profile information "can be" device information mischaracterizes what is actually disclosed. If Hartman et al. did provide such a teaching, this might lead one to conclude that, at least in some embodiments, Hartman et al. contemplated the profile information including only device information. However, what col. 6, 11.25-38 actually states is:

> "Information about the client devices used by each user, such as type of device and processing capabilities, may also be obtained and stored in the user profile database 140 or another database."

Thus, what is actually disclosed is that the profile information may additionally include device information, and not that profile information, in its entirety, may be device information.

Secondly, although Hartman et al. does disclose storing user profile data and client profile data, and that user profiles may refer to client profiles, and vice-versa, the reason for doing so is because multiple users may use a particular client, and a

particular user may use multiple clients. This has nothing whatsoever to do with data records having features that affect the compatibility of a data record with an end-user system. Rather, this deals with whether a user, via a specific client, may access certain data. As has been stated repeatedly during the prosecution of this application, accessibility to data by a device or system, and compatibility of data with a device or system, are completely different issues. It is the former at which, at best, Hartman et al. even hints.

Applicants submit that the Examiner is conflating, within the paradigm of the claimed technology, the plain and ordinary meanings of "compatibility" and "accessibility." Specifically, the plain and ordinary definition for compatibility, in the context of the claimed invention, is: (of software) capable of being run on another computer without change.2 According to the same source,3 accessibility has the following common meanings: (1) easy to approach, reach, enter, speak with, or use; (2) that can be used, entered, reached, etc.; (3) obtainable; attainable; and (4) open to the influence of (usually fol. by to). In the context of Hartman et al., either the second definition (that can be used, entered, reached, etc.) or the third definition (obtainable; attainable) fit, as it refers to the ability to use, reach, or obtain data. (Appeal Brief: pages 15-18)

Examiner's Response: The examiner respectfully disagrees Hartman fails to teach the claimed limitation. According to column 4, lines 43-46 of Hartman, "A 'record' is an entity having the attributes of one or more profiles. A record is one unit of storage in a database, though records may be comprised of profiles in multiple databases."

Therefore, each data record is associated with attributes. The attributes are considered to be analogous to the features since paragraph [0027] of the specification of the present invention states that they are interchangeable terms.

Hartman also teaches in column 6, lines 19-24 and column 7, lines 39-48 that the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes. The bitmask is what forms the one or more profiles of the record. According to column 8, lines 54-61 of Hartman, the binary attributes of the query profile are matched against the binary attributes in the query database. It is this matching that allows the compatibility of records to be determined. Therefore, in the realm of retrieving data from a database, the examiner fails to see a difference between the concept of accessibility disclosed by Hartman and the concept of compatibility disclosed by the claimed invention.

- ***Issue D.2: Hartman et al does disclose the claimed structure section***

Appellant's Argument: The final Office action also alleges that Hartman et al. discloses a structure section. The Office action references col. 6, 11.25-38, col. 7, 11. 16-26, and col. 8, 11.9-18 and 54-64 to support this allegation.

According to each of the independent claims: (1) each feature mask table that comprises the structure section includes a feature mask record for each of the multiple end-user systems that use one or more of the data tables that include the data records having one or more features, and (2) each feature mask record includes one or more feature mask values that indicate whether the one or more features of a data record are

compatible with one or more of the end-user systems, and thereby indicate whether the data record is" compatible with one or more of the end-user systems.

In the final Office action, the Examiner alleges that the content of each feature mask record, as delineated above, is disclosed at col. 8, 11.9-18 and 11.54-61 of Hartman et al. Appellant notes that col. 8, 11.9-18 of Hartman et al. states:

> "As described below, the method of querying a database is a reductive process. In a typical database query, the fields of each record of the database is 20 compared in turn against the query. If the fields of a record match the query, then the record is added to a list of matching records. A typical database query is therefore an additive process. According to the invention, a query is structured to benefit from how the data is stored (as described above), and how a query may be best processed. The present invention may also be considered a successive filtering process.";

and col. 8, 11.54-61 states:

> "In the binary attribute matching step (step 340), the binary attributes of the query profile are matched against the binary attributes in the query database. For example, if the query profile is based upon a user profile from the user profile database 140, then the query profile would be matched against the content profiles in the content profile database 150. Matching may be accomplished through binary operations, such as logical AND."

Appellant submits that neither of these sections of Hartman et al. (nor any other portion, for that matter) disclose, or even remotely suggest, that each feature mask

record 10 in a feature mask table includes one or more feature mask values that indicate whether the one or more features of a data record are compatible with one or more of the end-user systems, and thereby indicate whether the data record is compatible with one or more of the end-user systems. (Appeal Brief: pages 18-19)

Examiner's Response: The examiner respectfully disagrees Hartman fails to teach the claimed limitation. In the realm of retrieving data from a database, the examiner fails to see a difference between the concept of accessibility disclosed by Hartman and the concept of compatibility disclosed by the present application since the outcome of both is whether or not a user/device is able to retrieve and utilize database records. The present application states in paragraph [0039] that "The database access manager 114 is a program, which is preferably resident on each end-user system that is used by the end-user system 202 to extract compatible data records 204 from one or more data tables 202 in database 110. Furthermore, as stated above, Hartman teaches a structure section, each feature mask table including data a feature mask record for each of the multiple end-user systems that use one or more of the data tables that include the data records having one or more features [user profile includes information about the client devices] (see column 6, lines 25-38 and column 7, lines 16-26), each feature mask record including one or more feature mask values that indicate the data records is the one or more features of a data record are compatible with one or more of the end-user systems [binary attribute matching where user profile database can be matched against content profile database], and thereby indicate whether the data record is compatible with one or more of the end-user systems [holding list is a list of matching

records] (see column 8, lines 9-18 and lines 54-61). Hartman also teaches in column 6, lines 19-24 and column 7, lines 39-48 that the database server looks up the fields in the correlation table 160 and retrieves the bitmask for the binary attributes. The bitmask is what forms the one or more profiles of the record. According to column 8, lines 54-61 of Hartman, the binary attributes of the query profile are matched against the binary attributes in the query database. It is this matching that allows the compatibility of records to be determined.

- ***Issue D.3: McElhiney does disclose or suggest all that is alleged***

Appellant's Argument: McElhiney was cited in the final Office action for allegedly disclosing, at col. 7, 11.49-58, the "partitioning of a data table into a plurality of tables." Final Office action at 4. This portion of McElhiney states:

"After building the database structure, records are added to the search and detail tables of the database. As records are inserted, the system tests to determine if the number of records exceeds a predetermined threshold number, for example 50,000 records. When this threshold is exceeded, both the search and detail tables are partitioned, i.e. split into two sub-tables each. This threshold is tunable, based upon the size of the database and the size and number of disks in the computer system. When possible, the two sub-tables are placed on separate physical storage devices."

It is quite clear from the above that McElhiney merely discloses storing data in a database in the form of two-dimensional tables, and splitting each of the tables into sub-tables if the number of records exceeds some threshold. This is wholly disparate from

providing data sections and structure sections that comprise a plurality of data tables and feature mask tables, respectively. Nonetheless, even if one were to concede that McElhiney discloses what the Office action alleges, it does not make up for the rather glaring deficiencies of Hartman et al. with respect to the independent claims. (Appeal Brief: pages 19-20)

Examiner's Response: The examiner respectfully disagrees. McElhiney is utilized to teach the concept of partitioning a data table into a plurality of tables. It would have been obvious at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access to the records. Furthermore, the concept of utilizing a plurality of smaller tables instead of one large table is well-known in the art.

- ***Issue D.4: The Independent Claims are Obvious***

Appellant's Argument: In view of the foregoing, Appellant submits that the combination of Hartman et al. and McElhiney does not, and indeed cannot, establish a prima facie case of obviousness of any one of independent Claims 1, 15, 37, or 49. This is because the alleged combination of references fails to disclose each and every element recited in these claims. As such, there can be no teaching, suggestion, or motivation that would have led one of ordinary skill to combine these reference teachings to arrive at the claimed invention. Moreover, the Examiner has not provided a factual basis or articulated reasoning that the inventions encompassed by the

independent claims have resulted from: (1) combining prior art elements according to known methods to yield predictable results; (2) a simple substitution of one known element for another to obtain predictable results; (3) using a known technique to improve similar devices (methods, or products) in the same way; (4) applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (5) choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success (e.g., "obvious-to-try); or (6) known work in one field of endeavor that prompted variations of it for use based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art. (Appeal Brief: pages 20-21)

Examiner's Response: The examiner respectfully disagrees. For the reasons stated above, the combination of Hartman and McElhiney teach every claimed limitation. McElhiney is utilized to teach the concept of partitioning a data table into a plurality of tables. It would have been obvious at the time of the invention to partition the data section and the structure sections of Hartman into a plurality of tables as disclosed by McElhiney. One would have been motivated to do so to provide parallel access to the tables which accelerates access to the records. Furthermore, the concept of utilizing a plurality of smaller tables instead of one large table is well-known in the art.

- ***Issue D.5: The Dependent Claims are Obvious***

Appellant's Argument: Because independent Claims 1, 15, and 37 are not obvious, then dependent Claims 6, 7, 11, 20, 21, 25, 42, 43, and 47 are also believed

not obvious. In re Fine, supra. However, as will now be explained, the features recited in each of these dependent claims is also not disclosed or suggested by Hartman et al. and McElhiney. (Appeal Brief: page 21)

Examiner's Response: The rejections of claims 6, 7, 11, 20, 25, 42, 43 and 47 are maintained for the reasons stated above with regards to the independent claims and for the reasons stated below with respect to the individual claims.

- ***Issue a: Dependent Claims 6, 20 and 42***

Appellant's Argument: Dependent Claims 6, 20, and 42 each recite that the structure section further comprises a system identification table that includes data that uniquely identifies each of the end-user systems. The final Office action cites col. 6, 11.25-38 and col. 7, 11. 16-26 of 15 Hartman et al. as allegedly disclosing this feature. As noted above, col. 6, 11.25-38 states:

> "Information about the client devices used by each user, such as type of device and processing capabilities, may also be obtained and stored in the user profile database 140 or another database."
>
> Moreover, col. 7, 11. 16-26 states:
>
> "The client profile database 170 stores and provides profiles of client devices 100. Client profiles may include such information a software versions, processor type, processor speed, memory size, modem type, etc. The client profile 25 database 170 is related to the user profile database 140, in that the profiles of client devices 100 used by the users are stored in the client profile database 170.

User profiles may refer to client profiles, and client profiles may refer to user 21 profiles. This is because a given client may be used by multiple users, and a given user may use multiple client devices."

Although the client profile database of Hartman et al. may include profiles of client devices, there is no teaching or suggestion of including such information in a separate system identification table with a structure section. Moreover, this data may not "uniquely identify" each client device, since one or more users may have substantially identical client devices (e.g., software versions, processor type, processor speed, memory size, modem type, etc.). (Appeal Brief: pages 21-22)

Examiner's Response: The examiner respectfully disagrees that the combination of Hartman and McElhiney fails to include data that uniquely indentifies each of the end-user systems. In light of the specification, the claimed system identification table is considered to be analogous to the user system (see [0035] and Fig 9). Based on column 6, lines 25-38 and column 7, lines 16-28 of Hartman, the user profile and the client profile databases of Hartman are considered to represent the information that uniquely identifies each end-user system. Furthermore, Hartman states in column 4, lines 10-18, user identification is determined when a user requests to access content. Also, in order for Hartman to be able to retrieve a particular user profile or client profile, it is well-known in the art that some type of identifier would have to be utilized in order to differentiate between profiles since the profile database stores a plurality of profiles.

- ***Issue b: Dependent Claims 7, 21 and 43***

Appellant's Argument: Dependent Claims 7, 21, and 43 recite that the system identification table comprises a plurality of system identification records, and that each system identification record is associated with each of the end-user systems. The final Office action again cites col. 6, 11.25-38 and col. 7, 11. 16-26 of Hartman et al. as allegedly disclosing this feature. As may be readily apparent from the reproductions of these sections above, Hartman et al. does not disclose, or even remotely suggest, this additional feature. (Appeal Brief: page 22)

Examiner's Response: The examiner respectfully disagrees. Based on column 6, lines 25-38 and column 7, lines 16-28 of Hartman, the user profile and the client profile databases of Hartman are considered to represent the information that uniquely identifies each end-user system. The user profile database 140 of Hartman stores and provides information about users (see column 6, lines 25-38) while the client profile database 170 stores and provides profiles of client devices 100 (see column 7, lines 16-26). Hartman states in column 7, lines 19-2 that "The client profile database 170 is related to the user profile database 140, in that the profiles of client devices 100 used by the users are stored in the client profile database 170. User profiles may refer to client profiles and client profiles may refer to user profiles."

- ***Issue c: Dependent Claims 11, 25 and 47***

Appellant's Argument: Dependent Claims 11, 25, and 47 recite that each data record includes a plurality of fields in addition to the feature field, and that the structure

section further comprises a field definition table that includes at least data representative of each of the data record fields. The final Office action cites col. 7, 11.36-38 and col. 4, 11.35-46 of Hartman et al. as allegedly disclosing the former feature, and col. 7, 11.39-42 as allegedly disclosing the latter feature.

Col. 4, 11.35-46 of Hartman et al. merely discloses that the database is built from records, profiles, targets, and attributes, and also defines each of these terms. At col. 7, 11. 10 36-42, Hartman et al. discloses that when fields correspond to binary attributes, the database server looks up the fields in the correlation table and retrieves the bitmask for the binary attributes corresponding to the field. For range attributes and string attributes, some processing may be conducted prior to storing, and the retrieved bitmask, plus the values of the range attributes and string attributes, form one or more profiles of the record.

Appellant submits that these sections of Hartman et al. do not disclose, or even remotely suggest, the additional features recited in dependent Claims 11, 25, and 47, and for at least this additional reason these claims are not obvious. (Appeal Brief: page 23)

Examiner's Response: The examiner respectfully disagrees that the combination of Hartman and McElhiney fails to teach the claimed limitation. According to paragraph [0027] of the specification of the present invention, the term feature and the term attribute are interchangeable terms. In the cited columns, Hartman teaches the concept of the records containing attributes. Therefore, Hartman is considered to meet the requirements of the claim language given the broadest reasonable

interpretation of the claimed limitation. Furthermore, the correlation table 160 of Hartman is considered to be analogous to the field definition table of the claimed invention.

- ***Issue II: Claims 8-10, 12-14, 22-24, 26-28 and 44-48 are not patentable under 35 USC 103 over Hartman et al, McElhiney and Goldberg et al***

  - ***Issue C: Dependent Claims 8, 22 and 44***

Appellant's Argument: Dependent Claims 8, 22, and 44 each recite that the data section comprises a plurality of data tables that each include a plurality of the data records, and that the structure section further comprises a table pointer table that includes data that uniquely describes at least each of the data tables. The Examiner, in the final Office action, concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but alleges that Goldberg et al., at col. 14, 11.31-54, does disclose this feature. 20 The above-cited section of Goldberg et al. discloses a technique to avoid storing duplicate copies of rows or records, either while retrieving data from the database or storing a directed graph for transportation to the database. According to the disclosed technique, for each row that is stored in a buffer, an entry is made in a hash table that contains various data. These data include a unique row or record identifier, a pointer to the corresponding table definition in a table definition section of the buffer, a pointer to the row as stored in the fixed format data section of the buffer, and a link field for sequentially accessing all entries in the hash table in the same order that the entries

were added to the hash table. Before storing each row or record in the buffer, the hash table is checked to see if there is already an entry for that row or record. Appellant submits that this section of Goldberg et al. fails to disclose or even remotely suggest at least the additional features of dependent Claims 8, 22, and 44, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from which these claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: pages 24-25)

Examiner's Response: The examiner respectfully disagrees that column 14, lines 31-54 fails to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue D: Dependent Claims 9, 23 and 45***

Appellant's Argument: Dependent Claims 9, 23, and 45 each recite that the table pointer table comprises a plurality of table pointer records, and that at least one table pointer record is associated with each of the data tables. The Examiner, in the final Office action, concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but alleges that Goldberg et al., at col. 14, 11.31-54, does disclose this feature.

The above-cited section of Goldberg et al. was summarized above, and Appellant submits that this section of Goldberg et al. fails to disclose or even remotely suggest at least the additional features of dependent Claims 9, 23, and 45, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from

which these claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: page 25)

Examiner's Response: The examiner respectfully disagrees that column 14, lines 31-54 fails to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue E: Dependent Claims 10, 24 and 46***

Appellant's Argument: Dependent Claims 10, 24, and 46 each recite that each table pointer record includes data representative of at least a location of the associated data table, a number of the data records in the associated table, and a size of each data record in the associated data table. The Examiner concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but again alleges that Goldberg et al., at col. 14, 11.31-54, does disclose this feature.

The above-cited section of Goldberg et al. was summarized above, and Appellant submits that this section of Goldberg et al. fails to disclose or even remotely suggest at least the additional features of dependent Claims 10, 24, and 46, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from which these claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: page 26)

Examiner's Response: The examiner respectfully disagrees that column 14, lines 31-54 fails to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue F: Dependent Claims 12, 26 and 48***

Appellant's Argument: Dependent Claims 12, 26, and 48 each recite that the structure section further comprises one or more return type tables that each include data representative of a format of each of the data record fields. The Examiner, in the final Office action, concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but alleges that Goldberg et al., at col. 6, 11.33-41, col. 11, 11.37-59, and col. 13, 11.51-62, does disclose 20 this feature.

The above-cited sections of Goldberg et al. discloses the definition of DATA TYPE (col. 6, 11.33-41), describes the schema for a table (col. 11, 11.37-59), and describes the table definition section (col. 13, 11.51-62). Appellant submits that these sections of Goldberg et al. fail to disclose or even remotely suggest at least the additional features of dependent Claims 12, 26, and 48, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from which these claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: page 26)

Examiner's Response: The examiner respectfully disagrees that the cited portions fail to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue G: Dependent Claims 13 and 27***

Appellant's Argument: Dependent Claims 13 and 27 each recite a header

section that includes data representative of indicia that is used to identify the database. The Examiner concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but again alleges that Goldberg et al., at col. 6, 11.33-41, col. 11, 11.37-59, and col. 13, 11. 51-62, does disclose this feature.

The above-cited sections of Goldberg et al. were summarized above, and Appellant submits that these sections of Goldberg et al. fail to disclose or even remotely suggest at least the additional features of dependent Claims 13 and 27, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from which these claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: page 27)

Examiner's Response: The examiner respectfully disagrees that the cited portion fails to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue H: Dependent Claims 14 and 28***

Appellant's Argument: Dependent Claims 14 and 28 each recite that the header section further includes data representative of a location of the structure section. The Examiner concedes that neither Hartman et al. nor McElhiney disclose or suggest this feature, but again alleges that Goldberg et al., at col. 6, 11. 33-41, col. 11, 11.37-59, and col. 13, 11.51-62, does disclose this feature. 27 The above-cited sections of Goldberg et al. were summarized above, and Appellant submits that these sections of Goldberg et al. fail to disclose or even remotely suggest at least the additional features

of dependent Claims 14 and 28, let alone cure the deficiencies of Hartman et al. and McElhiney with respect to the claims from which these 5 claims depend. For at least this additional reason these dependent claims are not obvious. (Appeal Brief: pages 27-28)

Examiner's Response: The examiner respectfully disagrees that the cited portion fails to disclose the claimed limitation given the broadest reasonable interpretation of the claimed limitation. Therefore, the rejection is maintained.

- ***Issue III: Claim 49 is not patentable under 35 USC 103 over Hartman et al, McElhiney, Goldberg et al and Tang et al***

Appellant's Argument: Independent Claim 49 is commensurate in scope with the other independent, but is narrowly recited to the context of a flight management system and specifies navigation data. As noted above, none of Hartman et al., McElhiney, or Goldberg et al., either alone or in combination, is understood to disclose or suggest all of the features recited in any of the independent claims. Moreover, without conceding that Tang et al. discloses or suggests what the examiner alleges in the final Office action, upon review of this reference, Appellant submits that it also fails to disclose or suggest all of these features. In view of the foregoing, Appellant submits that the combination of Hartman et al., McElhiney, Goldberg et al., and Tang et al. fails to establish a prima facie case of obviousness of independent Claim 49. (Appeal Brief: page 29)

Examiner's Response: The examiner respectfully disagrees that the prior art of record fails to teach the claimed invention of claim 49 for the reasons stated above with regards to independent claims 1, 15 and 37 and in view of the rejection of the claim set forth above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kimberly Lovel/

Examiner, Art Unit 2167

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/John R. Cottingham/

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